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AIRLAND BATTLE--THE GLOBAL DOCTRINE?

BY

JOSEPH J. REDDEN
LIEUTENANT COLONEL, USAF

18 MAY 1983

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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO. A129888	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) AirLand Battle--The Global Doctrine?		5. TYPE OF REPORT & PERIOD COVERED Study Project
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) LtCol Joseph J. Redden, USAF		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS US Army War College Carlisle Barracks, PA 17013		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS SAME		12. REPORT DATE 18 May 1983
		13. NUMBER OF PAGES 61
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		15. SECURITY CLASS. (of this report) UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The question of the centralized control of close air support assets has been a major source of disagreement between the Army and the Air Corps/Air Force since World War II. It is the key issue of concern with regard to the implementation of the Army's AirLand Battle Doctrine. The study traces the origins of the AirLand concept. The concept of the AirLand Battle developed by TRADOC and championed by General Donn A. Starry, resulted in tremendously increased joint efforts in doctrinal development between the continued		

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Army and the Air Force. However, there are many areas yet to be resolved before the AirLand Battle can be accepted doctrinally by the Air Force. The study evaluates some of the major potential problem areas and proposes recommendations in three broad areas that could result in rapid resolution of the problems facing the implementation of the AirLand Battle Doctrine.

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USAWC MILITARY STUDIES PROGRAM

AIRLAND BATTLE--THE GLOBAL DOCTRINE?

INDIVIDUAL STUDY PROJECT

by

Lieutenant Colonel Joseph J. Redden
United States Air Force

US Army War College
Carlisle Barracks, Pennsylvania 17013
18 May 1983

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FOREWARD

The question of the centralized control of close air support assets has been a major source of disagreement between the Army and the Air Corps/Air Force since World War II. It is, in the author's opinion, the key issue of concern with regard to the implementation of the Army's AirLand Battle Doctrine. The concept of the AirLand Battle developed by TRADOC and championed by General Donn A. Starry, has resulted in tremendously increased joint efforts in doctrinal development between the Army and the Air Force. However, there are many areas yet to be resolved before the AirLand Battle can be accepted doctrinally by the Air Force. It is the purpose of this paper to evaluate some of the major potential problem areas. The opinions expressed in this paper are those of the author and in no way reflect the official positions of the Army War College or the Department of the Air Force.

TABLE OF CONTENTS

	Page
INTRODUCTION	1
EVOLUTION OF MODERN ARMY DOCTRINE.	3
EVOLUTION OF AIR FORCE DOCTRINE.	19
STRATEGIC IMPLICATIONS OF THE AIRLAND BATTLE	36
AN INTEGRATED ACQUISITION PROGRAM.	40
DOCTRINAL DIFFERENCES.	44
RECOMMENDATIONS.	52
CONCLUSION	54

I. INTRODUCTION

The development of doctrine has often resulted from pressure of combat. The successful march of German armies to the English Channel had a significant impact on the doctrine that carried the US and Allied armies to eventual victory in Europe. The doctrine that paced our Navy to successful carrier operations in the Pacific and led to the development of an awesome amphibious capability was a response to the success of Japanese military operations in the Pacific. The pressure of impending military disaster has been a great motivator in our past. Doctrinal changes that have occurred in peacetime have been influenced by a variety of factors. Among these are improved conventional capability, the proliferation of nuclear weapons, impact of the strong individual military leaders, inter- and intra-service rivalries, and our evolving national strategy.

The most recent revision of FM 100-5 espouses a doctrine that the author perceives as a marked change from the attrition warfare that has held sway since the tremendous growth in Soviet and Warsaw Pact conventional capability. The thread of emphasis that is seen throughout the current 100-5 is aggressive in nature. The motto of the manual is "Fight outnumbered and win!" For the first time in recent years, it would appear that the Soviets have not been accorded the status of a Goliath and we have accepted the very real possibility that they may be defeated in conventional warfare in Europe.

It is this apparent focus on a NATO conventional war that has drawn the greatest criticism to what is described as the AirLand Battle Doctrine. The revised doctrine requires the ability to conduct a war of maneuver so as to rapidly bring the greatest pressure to bear on the enemy's weakest

link. Expressed in one form or another, that has been the objective of all military leaders throughout history. However, the modern battlefield may prevent the deep thrusts implicit in this form of maneuver warfare, and we may well be prevented from projecting our military power to a depth of 300 kilometers behind enemy lines. It is our supposed inability to strike deep and conduct a war of maneuver upon which much of the criticism of the AirLand Battle Doctrine is based.

A second major criticism of the AirLand Battle Doctrine is that it is focused on the NATO environment with a micro, rather than macro, view of the battlefield. Our national strategy has placed our priorities with our NATO allies since its inception. It is not uncommon to find the doctrine developed for both our greatest threat and highest priority to have a distinctively NATO flavor. Although major problems do exist, one of the objectives of this study is to assess the applicability of the AirLand Battle to other potential theaters of conflict.

The AirLand Battle is an attractive option to the military professional because it is offensively oriented and is based on carrying the attack to the enemy. In the author's opinion, the doctrine espoused in FM 100-5 offers a tremendous opportunity to exploit the qualitative edge that the NATO Alliance should carry into the 21st century. However, there are several key areas that have not been adequately addressed in the formulation of the doctrine. The first of these, and the most important, is the question of control of air assets. With the requirement to strike deep with limited air assets, while conducting the other facets of the air campaign, as an integral part of the AirLand battle, the resolution of who will control the airpower is the key issue with regard to the doctrinal acceptance of the concept. This issue is the subject of the majority of research. The other major issues to be addressed are:

- o the strategic implications of the AirLand Battle Doctrine.
- o the acquisition policy required to support the doctrine.
- o other doctrinal differences which hamper the execution of the AirLand Battle.

The evolution of Army and Air Force doctrine from the period of the Second World War to the present provides an excellent perspective from which to evaluate our current areas of concern.

II. THE EVOLUTION OF MODERN ARMY DOCTRINE

In recent years, there have not been explicit examples of a single weapon or weapons system that has resulted in a radical change of doctrine. Since World War II, it has been the synergistic effect of weapons, or the evolutionary development of a class of weapons (such as tactical nukes) that has had the biggest impact on doctrine. The evolution of doctrine during and after World War II for US forces will provide a sound departure point for a thorough look at the doctrine of the AirLand Battle.

The period immediately following the Second World War was not an environment that stimulated the development of doctrine. The awesome power of the weapons dropped at Hiroshima and Nagasaki and our nuclear exclusivity led to a form of doctrinal complacency. Although our military leaders never lost sight of the fact that a war is won with the occupation of the enemy's territory with your troops, it was presumed that the start of any future war might well be with a strategic exchange on nuclear or biological weapons. In 1949, General Bradley postulated a three phase war consisting of an initial employment of our strategic weapons; the seizure of strategic bases from which to conduct a bombing campaign, or deny the enemy the ability to conduct his own campaign; and a final large scale assault to

defeat the enemy. (9:3-6) The traditional battlefield experience of Europe led to a continued emphasis on the doctrine that was so successful in the theater.

The basic assumption underlying all post-war doctrinal discussions was that ground warfare would continue to be nonnuclear. The 1949 version of FM 100-5 included only a brief discussion on the dangers of radioactivity and did not evaluate the possibility of an atomic battlefield. (27:60) Evaluation of future battlefields was limited primarily to the type of terrain over which the battle might be fought, with the basic combat principles applied to that terrain, and not to the consideration of a spectrum of combat operations over the terrain. (27:231-233) With the blockade of Berlin, the Soviets raised the spectre of a possible invasion of Europe and the possibility of an on-going development of a global doctrine faded. The emphasis remained on Europe.

One of the most important lessons to come out of World War II was the need for coordinated fire support. The number of tubes with each battery was increased after the war, and the Artillery School developed the grid method for the adjustment of naval gunfire. (22:3) Although the coordination of artillery was standard in all theaters, the same could not be said for close air support. In the Pacific, the Army developed SOPs for army, corps, and division levels that was based on the early Marine experience. (22:3) The close air support doctrine developed in the European Theater had its genesis in North Africa and was matured through employment in Italy and Normandy. Actual employment of air was, for the most part, an ad hoc arrangement varying from unit to unit.

The publication of FM 31-35, Air-Ground Operations, in 1946 stressed the integration of all means of fire support, with the first training circular on fire support coordination following shortly. (22:3) Although

there was a great deal of inter-service rivalry, some progress was made in the area of joint doctrine. In the period immediately following World War II, one of the biggest bones of contention was the disposition of the Tactical Air Control Party (TACP). The disagreement was centered on the location and number of the parties and the role of the artillery observer. The Artillery School maintained that the TACP should be organic to the direct support artillery battalion and manned on the basis of one per infantry and armored battalion. The school also argued that forward observers in artillery planes should control air strikes. The Artillery School also objected to the establishment of separate air control nets with the argument that tactical air support requests should be handled just like any other fire support request. (22:3) The newly independent Air Force was not about to surrender any of their autonomy to the artillery, and the dispute was resolved in their favor.

The development of the Army's organic air arm did not proceed very rapidly after World War II. The helicopters that had been procured during the last two years of the war had been used for administrative support and rescue missions. (22:4) In 1946, both the War Department Board and the Infantry Conference at Fort Benning analyzed the use of the helicopter. Although the War Department Board saw the helicopter as best suited for assisting in the supply of airborne troops and in ship-to-shore operations, the Infantry Conference described helicopters as particularly suitable for supply and evacuation, reconnaissance, observation, photography, column control, wire laying, and liaison and courier missions. (22:4) The post-war reorganization of the War Department gave the responsibility for the procurement of all aircraft to the Air Force. In a period when the strategic bomber generals held sway and our defense establishment, at least at

the senior administrative level, was enthralled by the power of the atomic bomb, it is no surprise that the Army helicopter procurement got short shrift. The lack of vision with regard to the helicopter's potential was epitomized by the Air Force director of requirements, who told Lieutenant General James M. Gavin that "The helicopter is aerodynamically unsound--I don't care what the Army says, I know that it does not need any." (31:109-11)

The Marines foresaw the helicopter as the way to conduct amphibious operations in the nuclear age and the development of the helicopter fell to them. By September of 1951, the Marines used helicopters in an airmobile operation for the first time. (22:4) Just prior to the Korean War, no new concepts or weapons systems had changed the Army's basic way of doing business. Doctrine and the conduct of combat operations still closely resembled those of World War II.

One of the lasting and most important concepts to come out of the Second World War was the conclusion of the 1946 Stillwell Board that "The best antitank weapon is another tank." (61:12) The evaluation of combat operations in Europe led to a "bulking-up" of our combat units prior to Korea. One of the conclusions of the General Board of the European Theater was that,

The uniformly better performance of infantry, in any operation, when closely supported by tanks is probably the biggest single tactical lesson of the European campaign. (22:5)

The answer was to provide more infantry for armored divisions and more armor for in the infantry. The infantry remained the Queen of Battle and changes in organization and structure were aimed primarily at giving her more responsive firepower.

At the beginning of the Korean War, Army doctrine stressed the offensive. The 1949 Field Service Regulations stated that, "The purpose of

offensive action is the destruction of the effectiveness of the enemy's armed forces and of his will to fight." (27:80) The tactical doctrine for the defense was more specific and centered on the concept of maintaining control of terrain. A Main Line of Resistance (MLR) was established along the most forward defense areas, but the doctrine called for a defense in depth, with large armored reserves, rather than a linear defense along the MLR. Under our doctrine, defeat of the enemy came as a result of offensive or counter-offensive action, and the defense was a method used only to gain time or economize forces while the proper offensive opportunity developed. Attrition was not really considered a part of destroying enemy combat effectiveness, since the objective was the destruction of entire enemy units and not soldiers. (22:6)

The initial phases of the Korean War were a war of movement during which a poorly prepared American Army was not always able to execute its doctrine. An Army that was organized and prepared to fight in Europe found difficulty in bringing its mechanized and motorized might to bear in the mountainous terrain of Korea. The North Koreans and later the Chinese used tactics that were able to exploit weaknesses in our defenses. The enemy stressed the exploitation of weak points followed by the envelopment or encirclement of the defensive position. The use of small guerilla units of as few as 15 men was very effective in disrupting units behind our lines. (71:16) The Chinese used superb camouflage and concealment to hide their units from the threat of air or artillery strikes. Without the threat of enemy air, our own units became lax in the use of camouflage. The effectiveness of massive UN artillery and air support led the Chinese to schedule most major attacks at night or under the cover of bad weather.

Many initial Chinese successes resulted from massed attacks against defensive positions that were simply too thin to absorb them.

The adaption of our tactics to the enemy soon led to much greater success. An offensively-minded Army used to victory was not prepared to conduct the extensive retrograde actions conducted at the outset of the war. The heat of battle soon resulted in the tactical expertise to conduct a cohesive withdrawal. Our experience in Europe had conditioned us to operate on broad fronts due to a shortage of units. Our units soon learned to develop strong defensive positions with all-around protection. The Chinese were thus allowed to roam the valleys by night, and then were attacked with strong combined teams of artillery, air and infantry during the day. (22:9) Defensive operations evolved from a more static defense aimed at the control of terrain to a more mobile defense. One of the most effective mobile defenses was used by the US I Corps and described as the "fight and roll." With this defensive concept, the defenders would maintain their defensive positions until they had exacted the maximum toll on the attacking enemy and then withdraw to a previously prepared secondary defensive position. A preplanned withdrawal might be conducted several times during the course of a major attack. The I Corps description of the defense stated that: "Units will be decimated, command and control channels lost and equipment gone. The mass becomes a struggling chaotic mixture of the remnants of many broken units." (18:5) Counterattacks were an integral part of the mobile defense and were used extensively to break up the tempo of enemy attacks. Artillery was also essential to the mobile defense and became even more important as the Korean War entered its static phase.

Tactical air had played a major role in providing additional firepower to blunt enemy maneuvering during the mobile phases of the war and continued to provide excellent support during the static phase. However the real value of tactical air was in dispute by the end of the war. General Otto P. Weyland, commander of the Far East Air Forces maintained that "We are pretty sure now that the Communists wanted peace, not because of a 2-year stale-mate on the ground, but to get airpower off their back." (29:643) Generals Maxwell D. Taylor and Matthew B. Ridgeway maintained that although airpower had been essential to the ground success, it had never been able to successfully close enemy supply lines. (22:12) The most important aspect of airpower from the Army perspective was the support provided, both directly and indirectly, to ground forces. An important lesson that appears to have been totally overlooked is that the full effect of airpower will never be realized as long as an enemy is given the luxury of sanctuaries from which to marshall his resupply effort.

The official position at the end of the Korean War was that no real changes in doctrine had occurred or been necessary. The training bulletins published immediately subsequent to the end of the war stated that there were few new lessons learned, and a 1954 study at the Infantry School stated that the most appropriate title might be "Lessons Relearned in Korea." (22:12) The conclusion of one of the training bulletins was that "The mass of material from Korea--reaffirms the soundness of US doctrine, tactics, techniques, organization, and equipment." (72:1) Although no official change in doctrine was recognized, the experience had a significant influence on the way we fought. Massive firepower had been employed at the expense of mobility. An enemy, who must use the same doctrine as the Soviets since they were using their equipment, had suffered huge losses at the hands of an attrition defense and firepower. It would appear that

this was the beginning of a defensive mind set that would influence our doctrine for the next twenty-five years.

The next era of doctrinal development for the Army was the atomic era. It was no less important in the historical evolution of modern Army doctrine, but will be dealt with more summarily than the Korean experience. The development of the pentomic division was an effort to provide an organization that would acquit itself equally well on the conventional or atomic battlefield. The division was organized into five battle groups that were relatively self-contained and included many of the elements previously found in the regimental combat team. (22:17) The basic component of the division was the infantry battle group which was larger than a battalion, but smaller than a regiment. Although all of the Army's divisions were affected by the reorganization, the biggest impact was on the infantry. Infantry divisions were reduced by approximately 3000 men, and the reductions were primarily in the areas of command and control and combat service support. Armored divisions were the least effected, with the primary change being the addition of an atomic fire capability and a stronger aviation detachment. The primary emphasis was on strategic mobility. All the division's equipment, with the exception of tanks, was to be transportable by long-range airlift. This emphasis on mobility gave a tremendous boost to the airborne units, which were organized under the pentomic concept. (22:17)

The reaction to the possibilities of a nuclear war resulted in the most radical change the Army had ever experienced in peacetime. The greater dispersion of troops on the atomic battlefield called for a greater mobility, and to a degree gave a tremendous boost to the development of organic aviation assets. Serious problems were encountered while trying to make all of the divisions' equipment air transportable. The development of

the weapons required to support the division lagged and their delayed delivery actually resulted in the inability of the pentomic division to combat an enemy force equipped with modern weapons. (22:19) The battlefield concept was "cellular," with each unit capable of an all-around defense. This concept presented tremendous transitional problems from the linear to a "porous" defense. The death knell of the pentomic division was sounded with the decision to reduce the Army's strength. With the Eisenhower administrations' emphasis on strategic and tactical nuclear weapons in the late 1950s, Army strength was reduced by almost 200,000 men between 1956 and 1959. (22:19) The belief of Army leaders was that more men and equipment were needed because of the scope of the atomic battlefield. The result was an Army of 15 divisions, organized for an atomic war, with an average of 3000 less men per division. The Army was virtually in a state of unpreparedness for the conduct of a conventional war. The technology of the pentomic concept had lagged behind the doctrine and the changes in organization had simply occurred too fast.

The shortcomings of the pentomic concept were well recognized by 1959, and General Bruce Clarke directed the preparation of a study titled "Modern Mobile Army 1965-1970 (MOMAR I)." The study proposed units that had to be capable of conducting worldwide operations in a nuclear or nonnuclear environment against a wide variety of enemy forces. The conventional firepower had to be upgraded from that of the pentomic division and tactical mobility enhanced through the addition of armored vehicles and aircraft. The concept proposed a heavy and a medium division, with the medium division capable of "sustained mobile combat." (22:19) The MOMAR I concept was evaluated by the CGSC before its approval by the Department of the Army. The study conducted by the CGSC determined that a standard division

could not accomplish all the tasks demanded of a widely varied operational environment and terrain, and recommended the creation of divisions that could be tailored to meet the tasking. The building block approach to unit organization supported a spectrum of conflict while accounting for the variations in the enemy and terrain. The DA did not accept some of the concepts of MOMAR I and directed the conduct of a new study with the following guidelines: divisions should be capable of nuclear and nonnuclear war; the battle group vice the return to the battalion should be analyzed; the use of a combat command or similar organization should be considered; and the emphasis should be on infantry, mechanized and armored divisions. (22:20)

The resultant study was entitled "Reorganization Objectives Army Division (ROAD) 1965." The study was quickly approved by the Chief of Staff, Secretary of the Army, and Secretary of Defense. In May of 1961, the President publicly announced approval for the Army reorganization to commence in 1962. The rapid approval of the reorganization was explained by Robert S. McNamara as a desire on the part of the Kennedy administration to separate the problems of strategic nuclear warfare from those of all other warfare. This was based on the belief that strategic nuclear weapons would not deter a broad range of aggression and that tactical nuclear weapons could not be substituted for conventional weapons in the conflicts that were likely in the 60s. (44:69)

The development of the ROAD division was the logical extension of the American combat experience in Europe and Korea. Although armored vehicles had been an integral part of units for years, the mechanized division was the first of its type in American military history. The basic feature of the new divisions was a common division base to which a number of different combat maneuver battalions could be attached. One of the most significant

changes was the increase in aviation assets. The ROAD division had approximately double the aviation assets of the pentomic division. The new division also had a support command, which provided the division with a logistics commander for the first time. Although the ROAD division had its critics, the dislike of the pentomic division was far stronger. General Garrison H. Davidson said, "Ground commanders everywhere breathed a sigh of relief when they were no longer faced with the grim possibility of having to employ it (the pentomic division) in combat." (22:22)

The tactical doctrine that accompanied the reorganization was essentially a return to the past. The major exception was the extensive use of the vertical envelopment. The development of Army aviation doctrine had been spurred by two major occurrences. The first of these was the lack of attention paid to the concern of the Army for battlefield support by the Air Force during the "Big Bomber" decade of the 50s. The second was the support given by the Kennedy administration to the development of an unconventional warfare capability, for which the helicopter is particularly well suited. The concept of defense was also changed, and evolved to a mobile or area defense. Conceptually, the most important change was in the role of the defense. In the 1949 Field Service Regulations, it was stated that "Defensive doctrine contemplates the selection and organization of a battle position which is to be held at all costs." (27:120) The 1962 Field Service Regulations included five purposes of the defense. Three were conventional in that they concerned using the defense to prepare for offensive action. However, the list also included to "to destroy or trap a hostile force" and to "reduce the enemy capability for offensive action."

The offense was no longer considered the primary means of destroying the effectiveness of enemy forces. Although the ROAD units possessed a

greater offensive capability than the pentomic units, a greater faith was placed in the defense. From the end of the Second World War to the early 60s, the focus had shifted from the offensive to attrition. Maneuver had been sacrificed to firepower and our doctrinal focus remained on the European theater.

As we approached Vietnam, there were many doctrinal and political lessons to be learned from our Korean involvement and the Atomic Era. There appeared to be many doctrinal lessons that came out of Korea. The first was the difficulty of applying a doctrine and military force that was built for another theater. The importance of light infantry and the power of maneuver warfare were certainly evident in Korea, as was the need to conduct night and all-weather operations. The political lesson of becoming involved in a prolonged conflict with no apparent decisive end was forgotten all too soon, as was the cost of allowing the enemy a sanctuary that was immune from any military action. The decade of the 50s saw an overreaction to the implications of the nuclear battlefield without having thought through all the implications of a nuclear war. Many strategists failed to realize that there could be a linkage between tactical and nuclear warfare. There were several lessons to be learned from the period and it is my impression that not many of them took. We entered the most traumatic conflict in our history not having learned from our most recent experience.

The military experience in Vietnam might be considered as our Spanish Civil War. Despite the frustrations of the political situation and the sense of puzzlement over withdrawing from a field upon which we had suffered no military defeat, there were several practical successes that came from our involvement. The organic Army aviation proved to be one of the most effective and valuable forces in the conflict. Doctrine and tactics

were developed that will be extremely effective in any future conflict and have served as the model for development of the Soviet attack and assault helicopter applications. Great strides were made in the ability to coordinate combat power. The entire spectrum of airpower was employed, and the skies over the North became a proving ground for smart weapons, air-to-air weapons, new tactics, and electronic warfare applications.

The greatest problem of the war was that we became a military force that suffered a loss of identity. The military vocabulary was enlarged by terms such as "pacification," "search and destroy," "clearing operations," and "securing operations." We fought an amalgam of static and maneuver warfare, with continued sweeps being conducted from well-fortified base camps. The biggest challenge became to "find Charlie" with all sorts of exotic paraphernalia being introduced from "people-sniffers" to McNamara's "Electronic Fence." In the end, we fell prey to a lack of commitment. Colonel Harry Summers has expressed the view that, "we must relearn that public support is critical to American national strategy." Colonel Summers quotes General Weyland, upon greeting the returning POWs in Saigon in 1973, as saying,

When the American people lose their commitment, it is futile to try to keep the Army committed. In the final analysis, the American Army is not so much an arm of the Executive Branch as it is an arm of the American people.

A great deal has been written about the cost of our involvement in Vietnam. The psychological impact on both the military and civilian communities is profound, and has not yet been fully evaluated. It does not serve the purpose of this paper to be sidetracked into the moral questions of the war. Doctrinally, the most important aspect of the war was the time and money lost for the development of new weapons systems and concepts. If the Soviets had convened a hypothetical brainstorming session to determine

the best way to freeze American military for a period of almost ten years, they couldn't have come up with anything better than the Vietnam war. The Required Operational Capability for the A-10 and the F-16 was written in 1964. That was the first step in their development process. The aircraft entered operational service with the Air Force in 1977 and 1978, respectively. We left Vietnam after a long hiatus in the acquisition of hardware and the development of doctrine.

The war in Vietnam was very infantry intensive and the concentration for almost a decade had been on small unit operations. By 1972, the focus was shifting from Vietnam to Europe and the mood was ripe for a reorganization of the Army. The determination was that we were now faced with two possible conflicts--a major mechanized war in Europe and a light infantry war in another theater. Although a major war in Europe was the least likely to occur, operational concepts were developed to deal with the most difficult problem. Doctrine for the employment of armor, mechanized infantry, and armored cavalry had changed little in a decade, and were actually derived from World War II with some modifications in the late 50s and early 60s. Technological advances included the introduction of long-range anti-tank weapons, larger caliber and longer-ranged artillery, the introduction and improvement of the helicopter, the increased coverage and range of air defense weapons, the proliferation of automatic weapons, and the development of more lethal and accurate tank guns.

The new doctrinal concepts that appeared in 1973 were the structure of two major architects--General William E. DePuy, then commander of TRADOC, and then Major General Donn A. Starry, commandant of the US Army Armor School. When the new edition of the FM 100-5 was published in 1976, it was immediately controversial. The tone of the manual was established in the first chapter, which emphasized that all Army units must be prepared to

fight outnumbered and win. The biggest factor influencing employment on the modern battlefield was the lethality of the weapons systems. The manual also cited the need for increased mobility, night-fighting capability, and electronic warfare improvements. Despite the heavy emphasis on the lethality of increased firepower, the manual did not ignore the use of maneuver for the offense or the defense. The key to success on the modern battlefield is the ability to concentrate combat power. Considering the possibilities of conflict ranging from low to high intensity war for the future Army, it was very probable that our forces will be outnumbered in any mid to high intensity conflict. The emphasis was primarily on defensive operations from 1973 until 1977. The discussion on the defense was the most controversial aspect of the new manual. The writers of the manual were convinced that the mobile and area defenses were not totally applicable to the modern battlefield and avoided giving the defense a label. Instead, the following list of principles was enunciated: "understand the enemy;" "see the battlefield;" "concentrate at the critical times and places;" "fight as a combined arms team leader;" and "exploit the advantages of the defender." There was also an addition to the list of purposes for the defense. It was to "force the enemy to mass so that he is more vulnerable to our firepower." This broad concept soon came to be known as the "active defense." (22:45)

The most detailed description of the active defense was found in FM 71-100, Armored and Mechanized Division Operations. It stated,

The concept of the active defense is to defeat the attacker by confronting him with strong combined arms teams confronting him from battle positions organized in depth. As the enemy attack moves into the defended area, it encounters fires of increased intensity from the front and especially the flanks. The defender constantly shifts forces to take maximum advantage of the terrain, and to put himself in a favorable position to attack.

The major criticisms of the active defense were that its success was heavily dependent on good intelligence to determine the enemy's main thrust, an ability to readily communicate the commander's intentions to his subordinates and the ability to rapidly move forces to concentrate their combat power. The defender was accorded a 3:1 combat ratio advantage, with the attacker needing a 6:1 advantage to overcome a good defense. The active defense was essentially a method by which US forces could fight outnumbered and win the land battle.

The 1982 version of FM 100-5 greatly extends the scope of the battlefield with the doctrine described as the AirLand Battle. As stated in the manual,

Operations based on this doctrine are nonlinear battles which attack enemy forces throughout their depth with fire and maneuver. They require the coordinated action of all available military forces in pursuit of a single objective. The battle extends from the point of close combat to the forces approaching from deep in the enemy rear. Fighting this way, the US Army can quickly begin offensive action by air and land forces to conclude the battle on its terms.

The listed purposes of the defense in FM 100-5 are:

cause an enemy attack to fail; gain time; concentrate forces elsewhere; control essential terrain; wear down enemy forces as a prelude to offensive operations; and to retain tactical, strategic, or political objective.

That list does not include any purpose that implies substitution of the defense for the offense. The AirLand Battle is offensive in nature and espouses taking the fight to the enemy. It is our ability to carry out that doctrine strategically, politically, and with our current and programmed equipment that deserves careful analysis.

III. EVOLUTION OF CLOSE AIR SUPPORT DOCTRINE

The major issue in the handling of tactical air is the allocation of resources between the three basic missions. Those missions are air superiority, interdiction, and close air support. The allocation and targeting of tactical air is one of the biggest issues to be resolved for the successful implementation of the AirLand Battle Doctrine. The lessons of successful coordination of air and ground forces are worthy of review before consideration of the AirLand Battle.

The introduction of a massed air effort under a unified command was by the Royal Flying Corps at the Battle of the Somme in 1916. Close air support by massed air was introduced by the British at the Battle of Cambrai in November of 1917. With the size of the forces involved, control of tactical air was very simple. Each field army had an aircraft brigade headquarters attached to it. Each brigade had a fighter wing. Fighter and bomber squadrons were shifted from one brigade to another by the RAF headquarters as they assessed the situation. Observation was the responsibility of squadrons dedicated to Army corps. (63:1) When the Americans entered the war, they borrowed much from the French and the British. Unlike the British practice, the headquarters for the US air service commander was collocated with that of General Pershing. The air commander, Brigadier General Billy Mitchell, established the relationship with General Pershing of air force component commander to theater commander, and enthusiastically endorsed collocation. The Germans did not keep pace with the Allies use of close air support, but surpassed them in the area of command and control. The Germans attached Air Liaison Officers (ALOs) to the infantry divisions in the area of the main offensive effort. They were tasked with providing air units with current information on the location of

the front, on the intent and plans of the army, and on important targets within the battle area. The Germans also came very close to the development of the Tactical Air Control Party (TACP). (19:130-132)

At the close of World War I, close air support was still in an embryonic stage. The struggles of the fledgling air corps to establish an identity and gain some degree of autonomy put the development of doctrine on a back burner. We were simply not organized to take advantage of some of the basic lessons learned in World War I and further exploit them.

Modern close air support was introduced by the Germans in 1940. Their doctrine for the command and control of close air support had been developed through detailed studies between the wars, and polished with combat experience in Spain and Poland. Their doctrine was based on unified control, collocated air-ground headquarters, ALOs, and TACPs at the main point of combat. A fast air request net linked the Army corps with its associated tactical air component. The Luftwaffe was designed to support the Army as a vast tactical air force and it was equipped and organized accordingly. Requests were forwarded from battalion or regiment, through division, to corps. Corps was linked to the tactical air element and could approve, redraft, or disapprove all requests. (19:140) It is ironic that the singularity of the Luftwaffe that made it so effective in the conquest of the Continent was actually its undoing in the Battle of Britain.

The initial impetus for the development of the tactical air doctrine of World War II was given by General George Marshall when he reorganized the Army and the War Department general staff in 1942. General Marshall strongly felt that in all theaters of operations the command of air, ground, and sea forces should rest with one man. The Army was reorganized into the Army Ground Forces (AGF), Army Air Forces (AAF), and the Army Service Forces (ASF). Only the chief of the AAF, General Hap Arnold, sat

with the newly formed Joint Chiefs of Staff. For all practical purposes, the AAF was an independent service. (63:7)

The first field manual concerning support of the ground forces was published in April of 1942. It was FM 31-35, Aviation in Support of Ground Forces, and was based on the results of the Louisiana-Carolina maneuvers of 1941. (30:116) The field manual was primarily concerned with organization and had little to say about the employment of tactical air. Portions of the manual which were to remain in the body of close air support doctrine were: the collocation of the headquarters of the air support command and the supported unit; the allocation of "air support parties" to division and below; and the preference to provide "air support control" from corps. (25:37) Air support requests were to go up through the chain of command until they reached a headquarters with an air support party. The party advised the ground commander on the technical aspects of the request, and if he approved, the request was forwarded to air support control. The officers in air support control met with the division or corps commander to evaluate the request. Upon the corps or division commander's approval, the air order was issued.

The initial organization of the AAF headquarters was inadequate to address doctrinal questions. The problem was solved with the reinstitution of the Air Corps Tactical School. The school had been closed after Pearl Harbor and the staff assigned to operational and training units. Although filling an immediate operational need, the closing of the school was soon recognized as being shortsighted. The school was reopened in October of 1942 as the AAF School of Applied Tactics and used returning combat veterans as the staff. An AAF board was established within the school to address doctrinal matters. (30:116-119)

As noted earlier, the combat experience which shaped the command and control of air support was different in the Pacific and European theaters. At Guadalcanal, AAF fighter squadrons operated under the operational control of the 1st Marine Air Wing. The World War I method of marking and signalling with panels proved to be ineffective in the dense jungle, so the Marines provided "air forward observers" equipped with radios to each regiment. This was the first step toward a forward air controller. (17:97)

Problems with interface between the services arose early in the Pacific. Although many of the aircraft used in early air efforts were B-17s, their employment was tactical. The first solution to command and control problems was to appoint an air officer as the commander of all Army forces. The commander, Major General Millard F. Harman, was given a staff that was heavily weighted with air officers and collocated (along with naval air) at the South Pacific Area (SPA) Headquarters. The prime responsibility of General Harman was to insure that the Navy's operational control over the B-17s was exercised in accordance with AAF doctrine. (63:10) Although AAF units were not tasked beyond their capabilities and the SPA staff consulted freely with unit and AAF staff officers on techniques, General Harman felt that cooperation at that level was not enough. Upon his recommendations, the Thirteenth Air Force was established as the centralized, formal AAF organization for the South Pacific. (63:11) By the time Thirteenth Air Force was established, the combat experience in North Africa was indicating that the provisions of FM 31-35 which let ground commanders control their own air might be defective.

The use of air in the North African campaign was hampered by the location of Allied airfields and the command and control arrangements. Close air support was provided in accordance with FM 31-35. The Twelfth Air Force was divided into air support, air defense, bombardment, and air

service commands. Its air support command was attached to the US 11 Corps, and operated both fighter and bomber squadrons. (15:140) When the Germans were engaged, 11 Corps had little interest outside their Corps boundaries. The Allied airfields were well to the rear, while the German's were located close to the front. Employment of air was fragmented, and once the Allied fighters left the front the Germans immediately took control of the skies. The resultant disaster can be lumped under Kasserine Pass and immediate steps were taken to provide the efficient employment of air.

The command of air support was formalized as follows for the campaign in Tunisia:

MEDITERRANEAN AIR COMMAND	AIR CHIEF MARSHAL TEDDER
NORTHWEST AFRICAN AIR FORCES	MAJOR GENERAL SPAATZ
NORTHWEST AFRICAN TACTICAL AIR FORCE	AIR MARSHAL CONINGHAM

It was Air Marshal Coningham's responsibility to provide air support for the British and American ground forces tasked with reducing the Italo-German bridgehead in Tunisia. (15:161-165) These arrangements recognized that the air forces cooperating with the ground battle had to be fought under a single air commander, since the planes, unlike the ground components, moved freely over the battlefield and could be employed in any part of it. The question of centralized control of direct air support appeared to be solved with the operations in Tunisia. What remained to be solved was the reconciliation of the Army's need for tactical air to be provided on an immediate basis to subordinate units with centralized control.

When reflecting on the conduct of war in January of 1943, General Sir Bernard Montgomery stated that the greatest asset of airpower was its flexibility, and that flexibility could only be realized when air was under

the control of an air officer working in close association with the ground commander. (30:121-122) He also stated that,

Nothing could be more fatal to successful results than to dissipate the air resources in small packets placed under command of Army formation commanders, with each packet working under its own plan.

General Montgomery's words must have been music to the ears of General Arnold and his principal planner, Brigadier General Lawrence S. Kuter, for they supported their belief that air should be organized functionally into strategic and tactical air forces. A request was forwarded to the War Department to request the formation of a board to review Army/AAF doctrine in the light of recent combat experience. The result of the board was FM 100-20, Field Service Regulations, Command and Employment of Air Power.

Only 14 pages in length, FM 100-20 explicitly set forth that land and air power were coequal and interdependent. It emphasized centralized control and command of the air through an air force commander. The manual stated that the theater commander

will exercise command of the air forces through the air force commander and command of the ground forces through the ground forces commander. The superior commander will not attach Army air force units to the ground force under his command except when such ground force units are operating independently or are isolated by distance or lack of communication.

The manual also provided for the exchange of liaison officers who were to be well versed in air and ground tactics. The following statement taken from the manual on direct air support indicates that a great deal of work remained to be done:

Massed air action on the immediate front will pave the way for an advance. However, in the zone of contact, missions against hostile units will be most difficult to control, are most expensive, and are, in general, least effective. Targets are small, well-dispersed, and difficult to locate. In addition, there is always a considerable chance of striking friendly forces due to an error in designation, errors in navigation, or

the fluidity of the situation. Such missions must be against targets readily identifiable from the air. and must be controlled by phase lines, or bomb safety lines which are set up and rigidly adhered to be both air and ground units. Only at critical times are contact zone missions profitable.

There were several factors that precluded any real progress being made on close air support during the remaining war years. There was a real lack of qualified personnel. The amount of material coming in from the field was massive. However, the crux of the problem was the inability to obtain Army Ground Forces concurrence with the new doctrine. In January of 1945, the AGF launched an attack on FM 100-20. The overseas theaters were on their own to resolve the remaining problems with the command and control of close air support. (30:126)

Although FM 100-20 detailed the problems with missions in the contact zone, there was a very real need for the ability to conduct "close" air support in the theaters. In the Pacific, the first air liaison officers had evolved into detachment commanders with enlisted subordinates and radios. It was a real tactical air control party, without the name, and used smoke shells or shell bursts to mark targets. (17:182,188) In Italy, the XII Tactical Air Command collocated their headquarters with the Fifth Army. Nightly planning conferences were conducted and requests for air support from the front went directly to the Army Air Section. The net was monitored by the appropriate corps and their silence indicated approval. The Army G-3 and XII TAC officers then determined if the request could be met. About 50 percent of the immediate requests were refused. Of those refused, about 75 percent were disapproved by the G-3 as not being in line with Army plans. The remainder were refused by TAC officers on technical grounds. Actual strikes were controlled by experienced pilots located on the ground.

In mountainous terrain, they took to the air in L-5s and became the granddaddys of the FACs we know today. (30:161)

In the ETO, the subordinate units of the ninth Air Force were aligned with the field armies. When planning the breakout from the Normandy beachhead, General Bradley requested the bombing of a six square mile area with minimum cratering. There was no radio control in the ETO at the time, so safety was to be provided by the use of visual signals and safety zones. The infantry was to advance after the heavy bombers had completed their drop and the fighters were narrowing the safety zone. There were two tragedies associated with the operation. A partly cancelled bombing mission on 24 July 1944, revealed a lack of clear understanding of the line of approach and a bombardier's error resulted in 25 American killed and 131 wounded. On the 25th of July, another bombing error resulted in 111 killed (including General McNair) and 490 wounded. As tragic as those errors were, the bombings resulted in the death or wounding of one-third of the German troops on the main line of resistance or in the immediate reserve. (63:19)

Just prior to the breakout, the commander of the IX TAC, Major General Elwood P. Quesada, suggested that an Air Support Party be put in each of the four combat commands of the two divisions that were to exploit the breakthrough. Each ASP was to have an AAF VHF radio to remain in contact with the tactical fighters provided armed recce for their advance. Ground commanders also monitored the net for intelligence purposes and any strike requests that could not be handled by the fighters overhead went back through the ASP channels for strip alert. (16:238-240) By August of 1944, FACs in L-5s were directing fighters on targets that had been nominated by the ground commander. In the space of one year, the command and control of

close air support had reached a high degree of sophistication and combat effectiveness. The task remaining was to transform practice into doctrine.

The preparation for the invasion of Japan saw an end to the tacit doctrinal freeze that occurred after the publication of FM 100-20. The Operations Division at the War Department was manned by both Army and AAF officers and could produce documents binding on both. This permitted the publication of two training circulars, No. 17, Air-Ground Liaison and No. 30, Tactical Air Command: Organization and Employment. With the end of the war, the lessons learned were incorporated into doctrinal publications. A revision of FM 100-20 led to the publication of a manuscript on air-ground operations. It was FM 31-35, Air-Ground Operations, and incorporated the majority of the experience from the ETO and North Africa. The new manual took the organization for the command and control of close air support beyond the point that FM 100-20 stopped. The command interrelationships remained much as they were during the last year of the war, but the Tactical Air Control Center (TACC), Tactical Air Direction Center (TADC), and Tactical Air Control Party (TACP) were formalized. Only the ALO got short shrift. (30:126,132,165)

The major effort to produce up-to-date doctrine was again slowed by the lack of qualified personnel. Within the Air Force, the question of where and who should develop doctrine really arose for the first time. The initial tasking went to Air University, which was directed to develop basic doctrines and concepts for the employment of air power, publish them, do related research, and involve itself with testing. This resulted in conflict with the field commands, many of whom had doctrinal responsibilities. (30:132,189)

In his last report as Chief of Staff of the Air Force, General Carl Spaatz suggested that the mission of Tactical Air Command required it to

develop and test doctrine and related techniques. Ideally, TAC Headquarters was in close proximity to Fort Monroe and the headquarters of Army Field Forces. The basis for the location of TAC had been to allow close daily contact between the personnel of the two headquarters. In February of 1949, while working with AFF to draft a joint paper defining areas of agreement and disagreement of the tactical air support of ground forces, TAC was informed that the AFF no longer concurred with the air-ground organization defined by FM 31-35. This was felt to be due in part to the fact that TAC was subordinate to Continental Air Command, which was on a par with AFF in the Army organization. (30:278)

Despite the lack of agreement between TAC and the AFF, plans were carried out to establish a provisional Tactical Air Force Headquarters at Pope AFB to work with V Corps Headquarters at Fort Bragg to develop joint maneuvers and training. After this development, work on the draft between TAC and AFF went more smoothly. The end result was to be a joint training directive that would then be tested by the TAC/V Corps arrangement. The resultant directive was an amplification of the principles and expansion of the procedures contained in FM 31-35. The outbreak of the Korean War caused the cancellation of the tests and maneuvers. Due to the urgency of the situation, the directive was issued jointly by TAC and AFF. The directive could be issued as doctrine for training in the ZI by the AFF. TAC could only hope that other Air Force commands would accept the documents as doctrine. (63:27)

The joint training directive was criticized by the Air University as departing too radically from FM 31-35. The major criticism was that Air University felt the emphasis should be on the use of theater air forces rather than tactical air forces. The criticism was not really relevant to

the main thrust of the JTD, which was the evolution of CAS command and control. Final Air Force approval was not delayed by Air University disapproval, and the JTD was formalized in March of 1951 so that there would be "uniformity in all air-ground training and instruction throughout the Air Force." The doctrine implicit in the JTD was being put to a thorough test in Korea. (30:339-41,346-47)

The tactical air control system that was established in FM 31-35 and expanded by the JTD of 1951 was used throughout the Korean War. A joint operations center was established by Fifth Air Force, TACPs were sent to regiment, and an Eighth Army air request net was established. FACs flying in T-6s were provided when jets flying out of Japan did not have the loiter time to identify their own targets. When the 1st Marine Air Wing (MAW) ended independent operations in December of 1950, it was deployed to South Korea and placed under the control of a Joint Operations Center (JOC). It became possible to mass the assets of Far East Air Forces Bomber Command, Fifth Air Force, the Seventh Fleet, and the 1st MAW for close air support. (29:658-662)

The unified control of Marine and Navy air that was exercised by the JOC recognized the realities of the tactical situation. The presence of Marine air was to compensate for the relatively small organic artillery available to the Marines when operating outside the range of naval gunfire. Marine commanders were always sensitive to losing control of their air assets. The 1st MAW possessed the command capabilities of a task force, and as such, were given a great deal of latitude by Fifth Air Force. Air Tasking orders almost always went through its commander, with the only bypass being immediate requests transmitted via hotline to Marine pilots on strip alert. The daily plans and intentions of the 1st MAW were presented at the Fifth Air Force morning conference by a Marine liaison officer.

The integration of naval air was not as easy. From November of 1950 to the end of hostilities, the Seventh Fleet maintained continuous contact with the JOC. The fleet schedule for the following day was transmitted by 1200. The JOC would then query the fleet on the assignment of aircraft to various missions. The "breakdown" of radio communications could result in uncertainty as to Navy intentions for the following day, the Navy liaison officer at the JOC did not have the authority to direct missions, but only relayed the JOC requests. Close air support by carrier air was valuable, but not easily integrated into the total effort. (29:315-16)

The provisions of FM 31-35 with regard to the TACS remained in effect throughout the war with one minor exception. In the last month of the conflict it was agreed that the Army would provide both the equipment and the enlisted men for the TACPs, while the Air Force would continue to provide the airborne coordinator. Sticking with the system outlined in FM 31-35 did not mean that there was agreement as to the control of tactical air. As early as the winter of 1950-1951, the Army maintained that the field army, and in some cases the corps, should be given the operational control of air units giving them reconnaissance and fire support. General Mark Clark, then Chief of Army Field Forces, held this view and felt that a special close air support aircraft should be developed. It is interesting to note that when General Clark was serving as Commander-in-Chief, Far East, he was given a proposal to attach a squadron of Marine air to each of Eighth Army's three corps. He effectively reversed himself by pointing out that the experience of World War II had pointed out the error in parceling out air in small packets. General Clark also noted that providing the Army divisions air a la the Marine Corps would be prohibitively expensive. (29:661-63)

Representatives of all the services met in Seoul at the close of the war to review joint air-ground operations. They endorsed the system and asked for a "joint air-ground doctrine that would encompass all services." (29:661) Their request was a far from easy task to fulfill. A series of joint boards established by the JCS did not produce any results, and they were dissolved in 1954. This was the year that General Gavin unveiled the sky cavalry concept, and the Army's reluctance to enter into binding discussions may have resulted from the previously unseen potential of the helicopter. (30:371) During this period, the Air University had been busily working to provide a basic doctrine as the foundation for all other air doctrine.

The approval of the basic air manual, AFM 1-2, in March of 1953 paved the way for the development of derivative topics. The methodology was to convene a broad based conference with representatives from the major air commands to review draft manuals on counter-air, interdiction, and close air support. The result was AFM 1-7, Theater Air Forces in Counter Air, Interdiction, and Close Air Support, which was published in March of 1954. Coordination was simplified with representation from the major air commands, but the doctrine was air and not joint. The manual made only one departure from FM 31-35. Rather than describing the joint operations center as a combined facility, AFM 1-7 stressed that it was an Air Force facility in which there would be ground representatives. The major innovation was the addition of the target director post in an attempt to use radar to control air strikes. (29:660)

The Army's growing interest in organic aviation led to growing pressures that would affect the TACS and present problems with the control of airspace over the battlefield. In January of 1955, General Matthew B. Ridgeway, then the Chief of Staff, stated that the Joint Training Directive

used in the Korean War contained command relationships and service responsibilities with regard to air-ground operations that the Army could no longer accept. Within a year, it was suggested by Major General Hamilton Howze that the helicopter should have the capability to conduct pursuit and exploitation missions as well as reconnaissance and security. (30:374)

The interface to address joint doctrine existed with the TAC/AFF and later the TAC/CONARC relationship. With the establishment of Strike Command in 1962, the first real opportunity for joint doctrinal development came with the authorization to develop the joint doctrine for the forces assigned to it. (30:744-45) As we approached Vietnam, the closest thing to joint doctrine was the successor to the 1950 Joint Training Directive. Although it was issued jointly by TAC and CONARC, it bore the disclaimer that it did not necessarily reflect the approved doctrinal positions of the Army, Navy, or Air Force. Its objective was to establish jointly acceptable operational procedures and its provisions would govern TAC and CONARC training. The document was TACM 55-3/CONARC TT 110-100-1, Joint Air Ground Operations (JAGOS), published in September of 1957.

While JAGOS was being written, the Army was going through the throes of the pentomic division, and much of what was reflected in the manual was influenced by equipment the Army never received and procedures that were never fully developed. The command and control of the pentomic division was to be provided by computers and electronic data processing that would require Army tactical support centers with electronic displays and large amounts of organic air at their disposal. The JOC was eliminated and the ground element was broken out into the Tactical Support Center (TSC). The TSC was the highest element in the chain of tactical support coordinating agencies between corps and division. The TSC was not explicitly collocated

with the air operating center. The TSC was responsible for coordinating all the tactical support available to its headquarters. This was to include Army aviation, missiles, and field artillery.

Organic Army aviation was provided with its own control system by JAGOS. There was a direct support aviation center in the TSC although Army requests for reconnaissance and close air support were passed to the Air Support Operations Center (ASOC) which was now located at each field army headquarters. The tactical air force commander now was responsible for operations at the Army group level and the World War II-type tactical air command disappeared. ALOs and FACs were under control of the ASOC and requests came up the chain from battalion to division to TSC with the corps monitoring. The Army had in effect created a system within the system.

The effort in South Vietnam is by far the most confusing to relate with regard to the evolution of CAS doctrine. It was rife with civil and military-political implications. Inter-service rivalry frequently flared, as at the battle for Khe Sanh, and the system was in a continuous state of flux. The Air Force was tasked with a dual mission in Vietnam--training and supporting the South Vietnamese. The TACS from 1962 to 1965 reflected this duality. Because of a lack of qualified Vietnamese officers, ALOs and FACs were required to take on more responsibility than envisioned doctrinally. Initially, the air request net was slowed by the requirement to obtain South Vietnam political approval for the employment of air. This practice was simplified in 1963-1964 with the agreement that all requests would go directly from the requester to corps with the intermediate headquarters monitoring. The air request net was to be manned and operated by airmen, which was a return to the World War II practice.

While the TACS system was being modified to meet the rapidly changing environment in Vietnam, there were serious efforts under way in the CONUS

to improve joint doctrine. The Army had been instructed by Secretary of Defense McNamara to conduct a study of future Army aviation without regard to traditional doctrine. The result was the August 1962 report of the Howze Board. The report recommended air assault divisions with 459 organic aircraft, air cavalry combat brigades with 316, and supporting units with aircraft on a comparable scale. As could be expected, a great amount of discussion about roles and missions was generated, and Mr. McNamara directed the Army and the Air Force to jointly examine the best way to provide close air support. (30:747-48)

The final report resulting from joint board action stated that the JCS had never approved a doctrine for air-ground operations nor for the use of airspace over the combat zone. The arrangements for Korea and Vietnam had tacit service approval and were not the result of formal JCS action. The boards concluded that no joint Army-Air Force agency had continuing responsibility to develop doctrine and evaluate equipment for CAS. The board proposals led to the establishment of the USAF Tactical Air Warfare Center in 1963. (30:749-50) Plans were immediately made for the conduct of joint tests of air-ground doctrine.

Exercises on the Eglin complex were a preparation for a Strike Command test called Gold Fire, that was to be conducted at Fort Leonard Wood in the fall of 1964. One of the major objectives of Gold Fire was the evaluation of the direct air request net. To speed the transmission of immediate air requests, FACs radioed them directly to a Direct Air Support Center (DASC) at corps. Intermediate Army headquarters monitored, with their silence indicating approval. This was the mirror-image of the direct air request net (DARN) that the 2nd Air Division commander, Major General Joseph H. Moore, was concurrently installing in Vietnam. It was also the system

that had been used by the Ninth Air Force across France and Germany in 1944. The system had not attained doctrinal status at the time FM 31-35 was drafted because the Army wanted to operate its own air request net. (30:753) The DARN was formally approved by the Army and the Air Force in 1965. The Air Force was content to settle for the agreement, because it avoided the possibility of broad inter-service complications. Approval of the DARN came just as the transition to big unit operations was being made in Vietnam.

With the commitment of US ground forces in 1965, the TACS was adjusted accordingly. The DARN worked effectively, and many of the delays that resulted from the earlier dual civilian/military chains of approval were eliminated. The introduction of Marine air and B-52s into the conflict did put some stress on the principle of unified control of air assets.

Control of the B-52s was retained by SAC, with the argument that they were primarily strategic assets temporarily used in a conventional role. Approval and execution of the "Arc Light" strikes went through a dual chain of command. With no real evidence to support it, the supposition persists that the lengthy line of communication from Omaha to Guam to Thailand must have occasionally telegraphed our intentions with regard to B-52 strikes and inhibited their effectiveness. The time required to get approval and plan a strike at the outset of their operation also limited the flexibility of the B-52 strikes.

With the introduction of Marine air units at DaNang and Chu Lai, the Corps had its organic air support ashore. In accordance with their doctrine of decentralized control of air assets, Marine ground units went through their own request net to obtain close air support. The scope of the conflict often resulted in cases where Marine and Navy assets weren't enough, as at Khe Sanh, or where they were needed badly to aid the overall

effort, as at the A Shau Valley. The Tet Offensive of 1968 highlighted the problems associated with the lack of central control for air assets, and the Seventh Air Force Commander was designated as the single manager for air in that year.

The experience in South Vietnam was that the TACS almost went full circle in the course of the conflict. Although there were many procedural modifications made to the system to account for the organization of the forces engaged, they should not be confused with changes in doctrine. Despite the addition of data automation, sensors, and smart weapons, the basic doctrine that evolved from World War II for the command and control of close air support had withstood the test of time--and the fire of two conflicts.

IV. STRATEGIC IMPLICATIONS OF THE AIRLAND BATTLE

Our national strategy has gone through three major changes over the past three decades that have had serious impact on the doctrine of our Army. They were the eras of nuclear supremacy, the era of parity, and the current era of nuclear insufficiency. During the period of western (US) nuclear supremacy, the development of weapons systems and doctrine suffered in the Army. We fought a police action in Korea that had a multitude of implications about the nature of our future conventional conflicts, yet the conclusions drawn after that war were that our doctrine was correct and virtually unchanged from that of World War II. Strategic thinkers held sway and it was assumed that the outcome of any future war might well be decided by nuclear weapons before the Army took any action on hostile territory.

The era of rough nuclear parity recognized the need to fight on the atomic battlefield. The Soviets did not possess a nuclear capability equal to ours at the start of the era, but they were capable of extensive delivery of atomic weapons. The result was a doctrinal overreaction on the part of the Army. The pentomic division concept was aimed at providing the wherewithal to fight, survive, and win on the nuclear battlefield. The reorganization into battle "groups" and the loss of personnel put the Army into a decline from which it took a long time to recover.

Our nuclear deterrence was still the cornerstone of our defense policy as we entered the 60s. Suffice it to say that our decade in Vietnam was one of stasis. Monies that would have been best used for developmental purposes were needed to support the war. Our doctrinal efforts were primarily aimed at the adaptation of an overwhelmingly conventional force to the conduct of a guerilla war. The Army fought exceedingly well, but the end effect on morale of our involvement produced a decline not unlike that in the 50s.

As we entered the era of nuclear insufficiency--an era best described as one in which the deterrent threat of our nuclear weaponry may no longer be credible--the real capability of our conventional forces becomes ever more important. Many theorists are concerned that the lessening of a nuclear deterrent invites war because the Soviets would not fear the escalation to a nuclear war they would be assured of winning. That is not a view held by the author, but it is not within the scope of this paper to do a detailed discussion of our nuclear strategy. Nuclear weapons do have a significant influence on the conventional doctrine. It is my belief that our nuclear deterrent is an adequate one. Adequate enough in any but the most extreme of circumstances to deter a nuclear war.

With the assumption of an adequate nuclear deterrent, the conduct of a conventional conflict becomes the key to containment of Soviet expansionism and deterrent to a conventional war in Europe. The Soviet military developments of the last three decades have been driven by their experience in the two world wars. The Soviet homeland was ravaged in both of those wars and millions of Soviets killed. The security of the homeland from an enemy force ever setting foot on their soil is the driving factor in the development of the overwhelming Soviet military build-up. The coalition of the Warsaw Pact nations has provided the Soviets a buffer to ever again seeing a war on their territory. That buffer has been further expanded by the NATO policy of determining to fight only to restore the national borders in the case of a conventional war. We have said that we will fight the war on the territory of our allies, and with the possible exception of damage from air attacks, the homeland of the Warsaw Pact and the Soviets will be virtually immune from major damage. An assurance of adventurism without major risk is almost an open invitation.

The ALB doctrine implies a much more confrontational strategy for our conventional forces than we have espoused in the past. It understandably makes our allies nervous, for the basic European predilection is for the easing of East-West tensions through economic and political means. The macho aspect of US foreign policy has always been viewed with some dismay by our allies. However, it is the macho aspect of our strategy that the ALB supports and, in fact, provides the capability to carry out.

Although the war in Vietnam provided time for many of the friendly nations in the area to prepare themselves for possible aggression or subversion, its unhappy end must have left severe doubts as to our trustworthiness. The Soviets have been forced to back down in two major crisis areas since the end of World War II--Berlin and Cuba. They have obviously

resolved not to let that happen again. We can be sure that they will pick the crisis very carefully. The Soviet ability to draw the US into a confrontational situation and force us to withdraw could well be the stroke that would start the slide of the US from preeminence as a world leader.

The policy of containment that we have subscribed to for years focused on the nuclear environment. It did not take into account the overall defense environment with regard to current and potential future threats. We have assumed that any conflict has the potential to escalate into a nuclear conflict and that our deterrent posture is hinged on that nuclear capability. In light of the potential conflicts of the 80s and 90s, I firmly believe that our strategy should be based on a flexible conventional deterrent posture and strategic nuclear adequacy.

Critics of the ALB suggest that the deep battlefield is not strategically acceptable in a majority of our major areas of potential conflict. In the case of Korea and Latin America, they are most probably correct.

It is very probable that the threat of a reunified Korea would draw a rapid Soviet, and perhaps Chinese, response. It would be very unlikely that either of the two major Communist powers would allow the North Koreans to be defeated by the South, even if the US kept its ground forces below the 38th parallel. The area of interest currently in FM 100-5 places us on the Chinese and Russian borders from many positions along the current DMZ. It is very doubtful that our national command authority would authorize the execution of operations of a battle plan that would result in a major confrontation between the superpowers.

The same argument can be made very effectively for a conflict in Latin America. The level of conflict would probably be very low. The stated political interest of the United States would most probably be the maintenance of the sovereignty of the beleaguered nation or nations. There

probably wouldn't be second or third echelon forces to conduct a deep strike campaign against and, in any case, the existence of sanctuaries for the aggressors would be an accepted fact. The question of Latin America is in the category of a non-argument. The level of force associated with the execution of the AirLand Battle is totally out of proportion to the scale of the conflict.

The doctrine of the AirLand Battle is a guide for the conduct of the battle to win in our worst case scenario. The Soviets need not risk a major confrontation with the US if they are capable of conducting a "nickel and dime" campaign of minor conflicts that we soon demonstrate the lack of resolve or the inability to project power to contain. The structure of forces necessary to conduct the ALB is ideal to support such a strategy.

The emphasis on an ability to field a maneuverable force with the ability to look deep and strike deep implies a lighter, readily deployable force than many of our current divisions. Such a force would be easily tailored to respond to almost any environment and would give us the capability to insure defeat of any Soviet-backed conflict or insurgency. Such a strategy does not forsake the need for a serious strategic deterrent. It simply puts us in the position of being able to make our adversaries pay for any conventional adventurism.

V. AN INTEGRATED ACQUISITION PROGRAM

The current political climate does not make it easy to predict the success of defense acquisitions. It appears that we have entered an era of detailed review of all defense proposals by a number of professional staffers and congressmen, and that the defense mandate that the President started his term with has been weakened. A growth in the defense budget

seems assured, but that it will not be the desired 10% appears also assured. The presentation of a united front on the most necessary defense acquisitions would be the best approach to insure our desired force structure. It is an approach that we have frequently failed to use in the past, and there is little evidence that we will be using it in the future.

There are three major areas that we lack the real capability to execute the AirLand Battle. They are tactical or battlefield intelligence; the ability to insert and extract forces at deep ranges behind the FLOT; and the resources to conduct a large volume of deep strikes with air assets.

The most important product of real-time tactical intelligence will be the revelation of enemy intentions. In the conduct of a maneuver battle, the location and movement of major enemy units would also be of the highest priority. At present, the majority of systems that are capable of providing that kind of intelligence are Air Force assets dedicated to strategic intelligence. We are faced with the choice of utilizing those systems to provide tactical intelligence or developing a series of systems that will fill the gap. Although the Standoff Target Acquisition System (SOTAS) demonstrated the capability to locate second echelon targets and look deep into the extended battlefield, it has become the victim of cost overruns. The next system that can provide that capability is the Quick Fix, and that is some years away from production in significant numbers. The corps systems, Guardrail and Quick Look, help develop deep targets, but they require a downlink to the division. The use of strategic assets may not be the best answer to our current shortfall in tactical assets, but it will provide the most near-time solution.

Every effort should be made to develop the downlinks necessary to provide the ground commander at the minimum of the corps level the product

of our strategic intelligence assets. A new approach will have to be taken to the targeting of those assets. High priority will have to be given to the disposition and movement of major enemy units, the development of large support areas (supply and ammo dumps), and the concentration of fire support weapons systems. The development of joint doctrine for the employment of the assets that can provide the necessary intelligence must become one of our highest priorities.

The ability to employ rangers of special forces at long ranges behind the FLOT provides both effective maneuver units and an important source of tactical intelligence. Our major means of insertion would be airdrop of air assault. The enemy surface-to-air threat has discouraged many from considering the option of the airdrop to be very viable in a high threat conventional conflict. That concedes a superiority to the enemy that is questionable. The network of surface defenses is far from impenetrable, and the use of offensive Electronic Counter Measures (ECM) and deception can provide the necessary gaps to conduct a successful operation.

The biggest shortfall to the conduct of such operations is the ability to airdrop or air assault them. Troop drops are required regular training for both strategic and tactical airlifters. They have the ability to ingress at low altitude and practice their skills regularly in simulated high threat environments at exercises like Red Flag and Maple Flag. The early stages of a large conflict will see our airlift assets dedicated to resupply, with little availability for major airdrop operations. The most probable means of using light infantry in the maneuver war will be by air assault.

The Army has an excellent aircraft for the role in the Blackhawk. The combat elements of an infantry company or a 105mm howitzer battery can be lifted by twelve Blackhawks. With the conclusion of a recent multi-year

contract, the acquisition is now at 613 aircraft. The eventual goal is 1,107 Blackhawks. The basic question is whether that will be enough. Present plans call for the Blackhawk to replace the Huey in ratios of seven for eight in Air Cav units and 15 for 23 in combat aviation support units.

The ability to strike deep interdiction targets at night and in adverse weather exists in the F-111. However, they are few in number and they are heavily committed to nuclear alert. The Air Force currently has a program to augment the F-111 with the derivative fighter program. The derivative fighter will be the F-15E or the F-16E missionized for the deepstroke role. The planned buy is for 400 aircraft. However, those 400 aircraft are not to be in addition to the current force modernization program, but as a part of it. Both aircraft are currently involved in a comparative evaluation for a policy decision that should be completed by November of 1983. The decision for production is predicted for March of 1984.

At this writing, the funds for the derivative fighter program have been eliminated from the 1984 budget by the House Armed Services Committee. The program has not been killed, but was lumped into a fund allocation for five major fighter programs. It has high priority from the Air Force, for it represents a capability that we badly need today. However, it may have tough political sledding.

The acquisition of the hardware to execute the doctrine of the AirLand Battle will call for greater service cooperation and less parochialism that we have ever seen. The priority of tactical intelligence for the battlefield commander should be coordinated between the Army and the Air Force and receive equal emphasis in the budgets. The development of the capability to conduct air insertions should be one of the Army's highest priorities, and it should receive the fullest support of the Air Force. The

reverse is true of the derivative fighter program. Only through mutual support and speaking in one voice on the critical issues will the force structure be developed to conduct the combat operations that the Army has committed itself to in the future.

VI. DOCTRINAL DIFFERENCES

The historic perspective gained from the review of the evolution of modern Army and Air Force doctrine reveals a basic difference in the doctrinal process of the services. The development of doctrine in the Army is a much more rapid process and, it would appear, more easily influenced by the strong leader with strong convictions. The major impact on Army doctrine since 1973 has been made by two men--Generals DuPuy and Starry. The last personality that can be traced to have had a significant impact on Air Force doctrine must be found in World War II.

The responsive system that can readily adapt to the changes and nuances of the national strategy has definite strengths, and some very definite weaknesses. Most certainly, one of the greatest strengths is the ability to capitalize on technological advantages and exploit temporary advantages in manpower, mobility or any other aspect of the military spectrum. That can also be a two-edged sword, as in the case of the pentomic division, where the doctrinal and organizational changes were made far too rapidly and technology never really caught up. In its current form, the author also believes that the Army's doctrine is far too responsive to the influence of one man, and that is the TRADOC commander. The basics of the AirLand Battle Doctrine have their roots in World War II. The doctrine itself took seed in the attempts to revive maneuver warfare made by General

DuPuy and General Starry in the early and mid-70s. It was General Starry that brought the doctrine to full bloom.

As the author of doctrine for the Army, the TRADOC commander is in a unique position found in no other service. He is the major influence on the development of doctrine and has the resources to readily assist him. In General Starry, TRADOC had a forceful, and particularly articulate leader, with an idea whose time had come. With the national strategy of containment, the best a ground commander in Europe could hope for was to hold on by his fingernails until the force of reinforcements from the CONUS could be brought to bear. The best we could hope for was to hold the enemy off until help arrived and to think of victory was foolish--victory would be a draw. The articulation of a doctrine that would take advantage of our inherent flexibility and presumed technological superiority and allow us to win becomes very attractive for several reasons.

The first of those reasons was psychological. Instead of an active defense that would inevitably become retrograde action, commanders could present their troops with a battle plan that permits them to hold, attack, and then defeat the enemy. To a national leadership that has lingering doubts over Vietnam, was forced to suffer the humiliation of the Iranian hostage crisis, and was in many ways unable to exert or project power around the globe, a doctrine that preaches decisive victory has to be attractive.

The perceptions of our NATO allies must be mixed at best. On the positive side, there is the definite indication that the adoption of a doctrine that, on the surface, appears to have been developed primarily for the NATO environment is clearly indicative of our primary focus. On the negative side, the policy of NATO has been to restore the political borders in Europe in the case of a conventional war. The adoption of a doctrine

that clearly implies taking the fight to the enemy on his soil, with little effort to coordinate or "sell" the doctrine to our allies has to be a little puzzling to say the least. Most puzzling in light of the fact that our rapidly maneuvering units who may strike deep into the corps commanders area of influence will have their flanks hopefully anchored by those same allies.

The perceptions of the Soviets and the Warsaw Pact must also be mixed. With the worst view of Soviet paranoia, the development of the AirLand Battle Doctrine is a logical extension of the aggressive plans of the western powers. It is simply another step, in a series of threatening steps, aimed at destroying the independence of the Soviet Union. To the Pact countries, it the first real notice that the West will not be content to fight a conventional war in Germany and her neighbors. Our doctrine of the active defense was essentially giving the Pact countries a free ride. There would certainly be damage to the western Pact countries resulting from attacks on their airfields, but if the war did not escalate beyond conventional weapons, the land battle would not be fought on their soil. To a Soviet Union whose defense policy has been primarily motivated by the damage suffered by the homeland in the Second World War, it was a clear warning that their territory would not be inviolate during the next conflict.

The second major reason for the attractiveness of the AirLand Battle Doctrine is that it is an excellent acquisition vehicle. It provides justification for added resources in many areas, but the two primary ones, aircraft and intelligence systems, are ones in which the Air Force and the Army have very basic disagreements.

The evolution of Air Force doctrine has occurred in two distinct periods. The first took place before 1943 and was characterized by total

support of the ground forces, to the exclusion of "other" missions, and decentralized control of the air assets. The North African experience in late 1942 provided the impetus for the development of a truly independent Air Force doctrine. The Air Force organization was radically changed shortly thereafter, with the strategic forces separated from the tactical. Emphasis was on the inherent advantages of airpower and the need for decentralized control. Those basic principles have remained firmly imbedded in Air Force doctrine. The evolution of Air Force doctrine has been a basically slow process with AFM 1-1 being basically a formalization of the principles and ideas that have been expanded over the years. The priorities in the application of those ideas have changed with shifts in our national strategy, but the principles have remained a constant despite great changes in technology, strategy and international relations.

One of the basic problems with regard to the development of a joint AirLand Battle Doctrine is semantics. The Army use of the doctrine implies techniques, procedures, and tactics. The Air Force makes a distinction between basic, operational, and tactical doctrine. In Air Force writing, doctrine implies how the service plans to fight in the immediate future, while concept implies future operations. It's very possible to agree to another service's concept, while disagreeing with their doctrine.

As previously noted, the ability of the TRADOC commander to rapidly development and approve doctrine is also a slight problem area for the Air Force. In essence, the approval of Air Force doctrine is made by consensus. Although TAC normally takes the lead role in the development of tactical doctrine with the tacit agreement of the other tactical commanders, they do not have the sole authority to approve doctrine or concepts for the Air Force. In the past few years, a close working relationship has developed between TAC and TRADOC, a relationship that is probably very close to what

was envisaged for TAC and the AFF headquarters after the Korean War. The relationship has proven very fruitful and has resulted in the development of the Joint Air Attack Team Concept, the Joint Attack of the Second Echelon (JSAK) concept, the Joint Suppression of Enemy Air Defenses (JSEAD) concept, and others. Therein lies the trap. The Army has frequently used the terms doctrine and concept interchangeably with reference to the AirLand Battle. The agreement of TAC to a concept with applicability to the AirLand Battle does not imply wholesale agreement with the AirLand Battle Doctrine.

There are three major areas of concern with the AirLand Battle Doctrine from the Air Force perspective. They are: absence of an Echelon Above Corps (EAC) to interface with the air component commander; inadequate sensors organic to the corps to see out to the area of interest (300 km); and an inadequate corps organic weapons system to strike targets in the area of influence (150 km). From an air perspective, the war in NATO will be a theater war, as will be the case in any part of the world. We do not have the luxury of unlimited air assets, and history has proven the effectiveness of a command and control system that allows us to centrally control air and decentrally execute it. The AirLand Battle is taken from the corps perspective, which may be too narrow a view of the the modern battlefield. There should be an intermediate command level that can coordinate, deconflict, and determine priorities between conflicting corps. The Army has maintained that there are no targets in the second echelon that are uniquely Air Force or Army, and I can think of no one who would take exception to that. However, the AirLand Battle (ALB) calls for the corps commander to autonomously strike targets deep in his area of influence. That may result in the duplication of targeting and strikes. Additionally,

the mission of interdiction is an Air Force one, and the development of organic Army capability to conduct what are essentially interdiction strikes may be very costly. The most apparent solution to the third major problem area would appear to be the ready access of the corps to Air Force intelligence assets. At present, the majority of the systems capable of providing a "deep" look are Air Force strategic intelligence. That does not mean that the strategic intell assets cannot be used for tactical purposes. The development of a corps organic intelligence asset with a deep look capability would be very costly, and would most likely die of wounds in the budget battle.

Another key doctrinal issue is the conduct of close air support operations. The verbage associated with our missions has become too complicated over the years. Simply put, close air support is those missions flown against enemy forces who are in close proximity to our forces. The modern conventional battlefield presents us with some difficult problems. The sheer volume of fire at the FLOT may prevent the coordination of air strikes that was the norm in Vietnam. The effect of enemy offensive ECM may well prevent the level of communications required, and we are now forced with a formidable Soviet helicopter threat.

The effectiveness of the helicopter was one of the key lessons the Soviets learned from our operations in Vietnam. Their building of a large fleet of attack and assault helicopters, and the employment of those helicopters in Afghanistan leave no doubt that they will contest that airspace over the FLOT. The development of the DIVAD will do a great deal to help counter their helos, but we have developed tactics and weapons to offset the effectiveness of Soviet AAA and they will soon do the same. There is no single best answer to the problem, but the development of a simple

missile for both attack helicopters and CAS fighters is needed. A "missionized" Cobra or Apache dedicated to antihelicopter operations would also help neutralize the threat.

The bottom line is that we must be open to changes in the way that we currently do business around the FLOT. The conduct of a close air support mission as we know it may not always be an option. Our NATO allies have recognized this doctrinally in ATP 27, Offensive Air Support Operations, and ATP 33, NATO Tactical Air Doctrine. Both documents recognize that a large number of missions may be flown without FACs or direct contact with the troops being supported. Our joint discussions about CAS far too often degenerate into parochialism. The question always is raised as to the Air Force's ability and willingness to fly the CAS mission. The thrust for control of all CAS assets is consistently made by the Army along with the argument that the mission would be best flown by helicopters.

The development of the Joint Air Attack Team (JAAT) tactics have proven very conclusively that the synergistic affect of the attack helicopter and the A-10 is far greater than their individual effort. It appears to be an idea that still meets with a lot of resistance in the Army. The development of the Apache attack helicopter is aimed at fulfilling the Army's requirement for undertaking a full day/night/adverse weather anti-armor mission while fighting, surviving, and living with the troops in a front-line environment. The need for such a weapons system is there, but the realities of acquiring it are probably slim. The Apache has an impressive avionics suite that includes a doppler navigation system, radar warning receiver, radar jammer, infra-red sensors, and an alser detector. That doesn't provide the full list, but the avionics suite alone may well have removed it from living with the troops. Advanced avionics require sophisticated maintenance. It has kept the Air Force tied to long strips of

concrete for years. The avionics also produces another unwelcome side effect--high costs. The figures currently quoted for the Apache, range from slightly over \$16 million to \$18 million. That is a price tag that Congress may be unwilling to pay in light of the fact that the proposed F-16E is quoted at \$15.4 million.

The object of this discussion is not to be critical of the Army's aviation program or the desire to obtain an advanced attack helicopter. The area of Close Air Support is one that requires the closest coordination between the Army and the Air Force, and that should be one of the readiest issues that we should be able to resolve. All services are faced with the limitations of the budget. We will never have unlimited Frontal Aviation resources as the Soviets seemingly do. Limited assets remain the best argument for the centralized control of air assets and the corresponding ability to concentrate them where needed. The Army will most likely end up with a "high-low" mix of Apaches and Cobras and not be able to totally support CAS requests without fixed wing support. The Air Force is trying to cut off the A-10 by not out of a lack of dedication to the CAS mission, but because the monies are needed to procure the ability to strike deep in support of another facet of the AirLand Battle. And so it goes. The bottom line is that neither service will obtain its desired force structure in the foreseeable future. The only way we will obtain the optimum force structure is through the resolution of our doctrinal differences and the presentation of a united front to the defense establishment and the Congress.

The picture of the ALB is far from a bleak one. There are disagreements from the perspective of the Air Force to the application of the ALB doctrine. They are not basic disagreements, but rather unanswered questions as to the exact ways and means of executing the battle. The basic

challenges facing the ALB doctrine and its implementation are: how to achieve inter-service agreement on the concept; the success of the Concept Based Requirements System (CBRS) and the elimination of "gold watches" from the acquisition process; and the ability to eliminate senior officer impact from the development of concepts and systems while still fielding them quickly. These will be discussed in more detail in the following recommendations.

VII. RECOMMENDATIONS

There are three broad areas that could result in rapid resolution of the problems facing the implementation of the AirLand Battle doctrine. They are the provision of an echelon above corps; an integrated acquisition policy; and an improved doctrinal process within the Air Force. The first of these to be addressed is the question of the echelon above corps.

The deletion of the field army eliminated a vital link in the Army/Air Force air-ground coordination system. The situation becomes the most serious if the US is acting in a unilateral capacity with two or more corps-sized units. The chances of our conducting unilateral operations of that size are very remote, but the need to restore the integrity of the air-ground coordination process remains. There are four logical options. They are:

1. Reestablish the field army in the operational chain of command.
2. Use the theater Army in the operational chain of command.
3. Designate a senior corps commander.
4. Establish a TASE element similar to that prefound in the field army.

Returning to the field army or putting the theater Army in the operational chain would appear to defeat what the Army reorganization tried to accomplish. The designation of a "first among equals" among the corps commanders places too much of an additional burden on an operational commander. The best solution is the establishment of a Tactical Air Support Element (TASE), preferably collocated with the Air Force TACC. At present, the reestablishment of the Third Army appears to be primarily for logistics purposes. It may turn out to be a factor in the operational chain. The need is for that level of command that will adjudicate the apportionment of the air resources from an Army perspective when fighting a multi-corps conflict. It should remain the highest priority in the evolution of joint doctrine.

Weapons systems acquisition has already been discussed in some detail. The basic approach should be that of viewing the deep battlefield as a system, with the complementary systems to fight on that battlefield as a package. The candidates that immediately come to mind are: (1) Continue with a high priority for the acquisition of the Blackhawk. Consideration should be given to acceleration of the growth to the planned 1,107 aircraft. The decision to replace the Huey at planned ratios should be reviewed. That reduction of aircraft strength for the aviation company, even though it is a more capable helo, may not provide the numbers to support the maneuver warfare called for in the AirLand Battle; (2) continue with high priorities for the Guardrail and Quickfix II system. Insure continued developmental funds for the Quickfix II system. Continue emphasis on the fielding of the All Source Analysis System (ASAS) and improved off the shelf downlinks from the existing strategic systems; and (3) support the 400 aircraft buy from the derivative fighter program. The buy will not

result in an increase in the current force program, but may open the way for the increase to the Air Force's eventual goal of forty-four wings.

The basic principles of airpower which led to the establishment of a separate service have remained the bedrock of Air Force doctrine. The terminology has changed with years, but the basic flexibility of airpower which dictates that it operate independently of other maneuver forces has not. The evolution of basic doctrine has been gradual, and the changing of tactical doctrine is a slow process. The basic problem today is that the Air Force has failed to formally assign the responsibility for the development of tactical doctrine to one agency. The concepts and doctrine division of the Air Staff is responsible for the publishing of our basic doctrine, but with regard to tactical doctrine they must practically yield to the Tactical Air Force commanders. Air University also plays a significant role in the development of basic doctrine, but primarily from the historical perspective. The headquarters for the Tactical Air Command was originally located at Langley AFB to provide better interface with the Army Field Forces. That remains true today for interface with TRADOC. The TAC commander should be formally assigned the responsibility for the development of tactical doctrine. The authority to publish tactical doctrine as gospel should not rest with TAC, but should be the result of review and coordination with PACAF and USAFE.

VIII. CONCLUSION

Before starting the research for this paper, the author had many preconceived notions about the AirLand Battle. They stemmed in part from the lack of wide-spread acceptance and understanding of the doctrine on the part of both Army and Air Force officers. Rather than finding a radical departure from the way we fought in the past, history tells us that we are

in many ways revisiting familiar territory. Technology gives us the ability to extend the battlefield and presents us with some different wrinkles to some old problems. A cynic might say that the AirLand doctrine is simply an acquisition strategy; that it provides the justification for a stronger organic aviation branch, tactical corps intelligence assets, and a corps artillery weapons system capable of striking to a range of 75 kilometers. Those acquisitions may result from the dedication to the execution of the AirLand Battle, but the doctrine, in my opinion, is the effort on the part of some of the senior Army leadership to simply motivate us out of a defensive mindset.

With all of NATO taken into consideration, the Soviets are outmanned by 750,000 troops. Their shorter LOC's obviously make their resupply problem simpler. They enjoy a rough advantage of 3:1 in tanks and slightly less than that in artillery pieces. (43:56) That is hardly an insurmountable advantage. Our strategy of slipping immediately into a defensive crouch to allow the Soviets to attrit us needs to be revised. The NATO conventional deterrent can be a very credible one. With many of the enhancements and acquisitions planned for the future, NATO will be in an excellent position qualitatively with regard to the Soviets. The biggest question is one of intent and resolve. In a recent article for the Military Review, General Donn A. Starry discusses the structure needed to complement change within the Army. One of the most important conditions that General Starry describes is the building of consensus. (60:23) The same is very true of all our allies with regard to the AirLand Battle.

The concept of the AirLand Battle is new to the majority of our allies. To our NATO allies, the idea of being provocative to the Soviets is often unacceptable. The offensive action required in the execution of

the AirLand Battle offers the chance to take the battle to the enemy and limit the destruction of our allies' homeland. Rather than being provocative, we are threatening the Warsaw Pact with having to pay a real price for conventional aggression. That alone should have political implications for the Soviets within their own sometimes fragile alliances.

The forces and structure required to fight the AirLand Battle do not preclude the conduct of operations in any other theater. The majority of our allies in other theaters use US equipment and operate very closely to our doctrine. Their acceptance of the AirLand Battle will primarily be a direct result of our ability to build consensus.

As discussed previously, perhaps the greatest benefit of the AirLand Battle doctrine has been the increased joint work being done by the Army and the Air Force. During the Team Spirit 83 exercise, the Battlefield Control Element (BCE) was played. The volume of air effort was too high to require the BCE to adjudicate the allocation of air resources. Although the final reports of the exercise are not complete at this writing, the integration of the AirLand Battle concept into a Korean scenario posed no major problems. Although there are serious doctrinal disagreements between the Air Force, Navy, and Marine Corps over the control of air assets, there were no major problems with the integration of the Navy and Marine assets into the overall air effort once the amphibious phase was completed.

The efforts of TRADOC and TAC have produced a lot of results in support of the AirLand Battle. Among these are Joint Suppression of Enemy Air Defenses (JSEAD) and Joint Attack of the Second Echelon (JSAK). These documents are not readily accepted as doctrine by the remainder of the Tactical Air Forces (TAF), but there is every evidence that the coordination process is improving. In the past, the primary emphasis has been on the coordination between TAC and USAFE, with PACAF not fully in the loop.

There are indications that the PACAF Commander will be upgraded to a four star billet in the near future. The elevation to that of equal among the warlords will go a long way to insure the inclusion of the command in future doctrinal discussions.

The AirLand Battle is not all things to all people. There are still major areas that must be resolved before it can be successfully executed, but it offers an exciting challenge to the military professional. It has caused a great many people to focus their attention on our warfighting ability, and the resolution of the problems we face. We are on the road to greater inter-service cooperation, and with strong national leadership, the development of a credible conventional deterrent.

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